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**From:** Takaba, Richard R [richard.takaba@doh.hawaii.gov]  
**Sent:** 2/24/2017 4:03:00 AM  
**To:** Pallarino, Bob [Pallarino.Bob@epa.gov]; TU, LYNDSEY [Tu.Lyndsey@epa.gov]; Ronald Chinn [ron.chinn@innovex.net]  
**CC:** steven.chang@doh.hawaii.gov; Whittier, Robert [Robert.Whittier@doh.hawaii.gov]; Frazier, William Mark [william.frazier@doh.hawaii.gov]; Heu, Randall [randall.heu@doh.hawaii.gov]; Bernier, Jenny [jenny.bernier@doh.hawaii.gov]  
**Subject:** FW: RBW Comments on the 4th Qtr GW Monitoring Report  
**Attachments:** Comments on 2016\_4th-Qtr\_GW\_Reports.docx

Thanks Bob,

Good comments on the 4Q Oct 2016 Red Hill sampling.

I couldn't find anything wrong with their discussion. The NAPs are interesting...but anomalous without accurate gw gradients. I also think the DO on lab analysis is biased by the low flow slow collection time. There is ambient 20% O2 in the containers until they are full. The filling tube is also hovered above the bottle opening during all collection. Also the flow thru cell measured DO at 0.1 on stabilization at RHMW02. The lab said there was 0.61 in the sample.

RHMW01 had DO of 10. We did not observe the Oct 2016 sampling. The field notes prob show the flow thru cell's DO for RHMW01 on stabilization. MW01 also has the longest collection time for any well.

The methane and iron and other NAPs at RHMW02 show that anaerobic metabolism is definitely occurring to the water found in the well. The silica gel prep show 1000 out of 1300 ug/L TPH-d captured as polar weathered.

I also agree that RHMW04 is not a true background well. Probably none of these but RHMW09 comes closest.

Rich

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**From:** Whittier, Robert  
**Sent:** Thursday, February 23, 2017 9:41 AM  
**To:** Takaba, Richard R <richard.takaba@doh.hawaii.gov>; Frazier, William Mark <william.frazier@doh.hawaii.gov>; Pallarino.Bob@epa.gov; ron.chinn@innovex.net  
**Subject:** RBW Comments on the 4th Qtr GW Monitoring Report

Hi All,

Attached are my comments on the 4th Quarter Report. Did not have time to review in detail, focused primarily on areas that may not be looked at closely by others (i.e. supplementing rather than duplicating efforts of others).

Take a look and let me know if you have any questions or concerns.

Thanks,  
Bob W.